



INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known

Sheet	1	of	7	Application Number	09/933,862
				Filing Date	August 20, 2001
				First Named Inventor	Baoxin Li, et al.
				Art Unit	2621
				Examiner Name	Nhon T. Diep
				Attorney Docket Number	7146.0124

U. S. PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant, Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US-3,580,573	05-1971	Noonan et al.	
		US-4,253,108	02-24-1981	Engel	
		US-4,298,884	11-03-1981	Reneau	
		US-5,109,482	04-28-1992	Bohrman, D.	
		US-5,452,016	09-19-1995	Ohara, et al.	
		US-5,521,841	05-28-1996	Arman, et al.	
		US-5,635,982	06-03-1997	Zhang, et al.	
		US-5,654,769	08-05-1997	Ohara, et al.	
		US-5,664,227	09-02-1997	Muedin, et al.	
		US-5,778,108	07-07-1998	Coleman, Jr.	
		US-5,821,945	10-13-1998	Yeo, et al.	
		US-5,828,809	10-1998	Chang, et al.	
		US-5,920,360	07-06-1999	Coleman, Jr.	
		US-5,959,681	09-28-1999	Cho	
		US-5,959,697	09-28-1999	Coleman, Jr.	
		US-5,969,755	10-19-1999	Courtney	
		US-5,990,980	11-23-1999	Golin	
		US-6,014,183	01-11-2000	Hoang	
		US-6,055,018	04-25-2000	Swan	
		US-6,100,941	08-2000	Dimitrova, et. al	
		US-6,219,837	04-17-2001	Yeo, et al.	
		US-6,236,395	05-22-2001	Sezan, et al.	
		US-6,304,665	10-16-2001	Cavallaro, et al.	
		US-6,342,904	01-29-2002	Vasudevan, et al.	
		US-6,363,160	03-26-2002	Bradski, et al.	
		US-2002 0080162	06-27-2002	Pan, et al.	
		US-6,418,168	07-09-2002	Narita	
		US-2002 0141619	10-03-2002	Standridge, et al.	
		US-6,549,643	04-15-2003	Toklu, et al.	
		US-6,556,767	04-29-2003	Okayama, et al.	
		US-6,678,635	01-13-2004	Torinkere, et al.	
		US-6,691,126	02-10-2004	Syeda-Manmood	
		US-6,724,933	04-2004	Lin et. Al.	
		US-2004 0125124	07-01-2004	Kim, et al.	
		US-6,774,917	08-10-2004	Footte, et al.	
		US-6,970,510	11-2005	Wee, et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		SELIM AKSOY and ROBERT M. HARALICK, "Textural Features for Image Database Retrieval," Intelligent Systems Laboratory, Department of Electrical Engineering, University of Washington, Seattle.	
		GIRIDHARAN IYENGAR and ANDREW LIPPMAN, "Models for automatic classification of video sequences," SPIE Vol. 3312, pp. 216-227	
		HONGJIANG ZHANG, STEPHEN W. SMOLIAR and JIAN HUA WU, "Content-Based Video Browsing Tools," SPIE Vol. 2417, pp. 389-398.	
		BILGE GUNSEL, YUE FU and A. MURAT TEKALP, "Hierarchical Temporal Video Segmentation and Content Characterization," SPIE Vol. 3229, pp. 46-56.	
		SUNGHOON CHOI, YONGDUEK SEO, HYUNWOO KIM, and KI-SANG HONG, "Where are the ball and players?: Soccer Game Analysis with Color-based Tracking and Image Mosaick," Dept. of EE, Pohang University of Science and Technology, Republic of Korea, pp. 1-15.	
		VIKRANT KOBLA, DANIEL DeMENTHON, and DAVID DOERMANN, "Identifying Sports Videos Using Replay, Text, and Camera Motion Features," University of Maryland, Laboratory for Language and Media Processing; at least one year prior to filing date; 12 pages.	
		RICHARD W. CONNERS and CHARLES A. HARLOW, "A Theoretical Comparison of Texture Algorithms," IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. PAMI-2, No. 3, May 1980, pp.204-222.	<input type="checkbox"/>
		S. E. LEVINSON, L. R. RABINER, and M. M. SONDHI, "An Introduction to the Application of the Theory of Probabilistic Functions of a Markov Process to Automatic Speech Recognition," American Telephone and Telegraph Company, The Bell System Technical Journal, Vol. 62, No. 4, April 1983, pp. 1035-1074.	
		LAWRENCE R. RABINER, "A Tutorial on Hidden Markov Models and Selected Applications in Speech Recognition," Proceedings of the IEEE, Vol. 77, No. 2, February 1989, pp. 257-286.	
		B. B. CHAUDHURI, N. SARKAR, and P. KUNDU, "Improved Fractal Geometry Based Texture Segmentation Technique," IEEE Proceedings-E, Vol. 140, No. 5, September 1993, pp. 233-241.	
		ALBERTO DEL BIMBO, ENRICO VICARIO and DANIELE ZINGONI, "A Spatial Logic for Symbolic Description of Image Contents," Journal of Visual Languages and Computing (1994) 5, pp. 267-286.	
		ZHANG STEPHEN W. SMOLIAR and HONGJIANG, "Content-Based Video Indexing and Retrieval," IEEE 1994, pp. 62-72.	
		F. ARMAN, R. DEPOMMIER, A. HSU, and M-Y. CHIU, "Content-based Browsing of Video Sequences," Proceedings of ACM International Conference on Multimedia '94, October 15-20, San Francisco, CA, USA.	
		STEPHEN S. INTILLE and AARON F. BOBICK, "Visual Tracking Using Closed-Worlds," M.I.T. Media Laboratory Perceptual computing Section Technical Report No. 294, November 1994, pp. 1-18.	
		STEPHEN S. INTILLE, "Tracking Using a Local Closed-World Assumption: Tracking in the Football Domain," M.I.T. Media Lab Perceptual Computing Group Technical Report No. 296, pp. 1-62, Submitted to the Program in Media Arts and Sciences, School of Architecture and Planning on August 5, 1994.	
		MICHAEL A. SMITH and TAKEO KANADE, "Video Skimming for Quick Browsing based on Audio and Image Characterization," July 30, 1995, Carnegie Mellon University, School of Computer Science, Pittsburgh, PA.	
		NEVENKA DIMITROVA and FOROUSAN GOLSHANI, "Motion Recovery for video Content Classification," ACM Transactions on Information Systems, Vol. 13, No. 4, October 1995, pp. 408-139.	
		R. W. PICARD, "A Society of Models for Video and Image Libraries," IBM Systems Journal, Vol. 35, Nos. 3&4, 1996, pp. 292-312.	
		B.S. MANJUNATH and W.Y. MA, "Texture Features for Browsing and Retrieval of Image Data," IEEE Transactions on Pattern Analysis and Machine Intelligence," Vol. 18, No. 8, August 1996, pp. 837-842.	
		SHIN'ICHI SATOH and TAKEO KANADE, "Name-It: Association of Face and Name in Video," School of Computer Science Carnegie Mellon University, Pittsburgh, PA, December 20, 1996, pp. 1-17.	

		MINERVA YEUNG, BOON-LOCK YEO, and BEDE LIU, "Extracting Story Units from Long Programs for Video Browsing and Navigation," IEEE 1996, pp. 296-305.	
		JONATHAN D. COURTNEY, "Automatic Video Indexing via Object Motion Analysis," Pattern Recognition, Vol. 30, No. 4, pp. 607-625, 1997.	
		MINERVA M. YEUNG, "Video Visualization for Compact Presentation and Fast Browsing of Pictorial Content," IEEE Transactions on Circuits and Systems for Video Technology, Vol. 7, No. 5, October 1997, pp. 771-785.	
		BOON-LOCK YEO and MINERVA M. YEUNG, "Retrieving and Visualizing Video," Communications of the ACM, December 1997, Vol. 40 No. 12, pp. 43-52.	
		MARK T. MAYBURY and ANDREW E. MERLINO, "Multimedia Summaries of Broadcast News," IEEE 1997, pp. 442-449.	
		MICHAEL T. CHAN, YOU ZHANG and THOMAS S. HUANG, "Real-Time Lip Tracking and Bimodal Continuous Speech Recognition," 1998.	
		T. LAMBROU, P. KUDUMAKIS, R. SPELLER, M. SANDLER, and A. LINNEY, "Classification of Audio Signals Using Statistical Features on Time and Wavelet Transform Domains," IEEE 1998, pp.3621-3624.	
		PADHRAIC SMYTH, "Belief Networks, Hidden Markov Models, and Markov Random Fields: a Unifying View," Information and Computer Science Department, University of California, Irvine, CA, March 20, 1998, pp. 1-11.	
		RICHARD J. QIAN, M. IBRAHIM SEZAN, and KRISTINE E. MATTHEWS, "A Robust Real-Time Face Tracking Algorithm," IEEE 1998, pp. 131-135.	
		DULCE PONCELEON, SAVITHA SRINIVASAN, ARNON AMIR, DRAGUTIN PETKOVIC, and DAN DIKLIC, "Key to Effective Video Retrieval: Effective Cataloging and Browsing," ACM, August 1998, pp. 99-107.	
		DANIEL DeMENTHON, VIKRANT KOBLA and DAVID DOERMANN, " Video Summarization by Curve Simplification," ACM 1998, pp. 211-218.	
		NUNO VASCONCELOS and ANDREW LIPPMAN, "Bayesian Modeling of Video Editing and Structure: Semantic Features for Video Summarization and Browsing," IEEE 1998, pp. 153-157.	
		RICHARD QIAN, NIELS HAERING, and IBRAHIM SEZAN, "A Computational Approach to Semantic Event Detection," IEEE 1999, pp. 200-206	
		ZHU LIU and QUIAN HUANG, "Detecting News Reporting Using Audio/Visual Information," IEEE 1999, pp. 324-328.	
		ULLAS GARGI, RANGACHAR KASTURI, and SUSAN H. STRAYER, "Performance Characterization of Video-Shot-Change Detection Methods," IEEE Transactions on Circuits and Systems for Video Technology, Vol. 10, No. 1, February 2000, pp. 1-13.	<input type="checkbox"/>
		NOBORU BABGUCHI, YOSHIHIKO KAWAI, YUKINOBU YASUGI, and TADAHIRO KITAHASHI, "Linking Live and Replay Scenes in Broadcasted Sports Video," Proceedings of ACM Multimedia 2000 Workshop on Multimedia Information Retrieval (MIR2000), pp. 205-208, November 2000.	
		CHUNG-LIN HUANG and CHIH-YU CHANG, "Video Summarization using Hidden Markov Model," IEEE 2001, pp. 473-478.	
		PENG XU, CHIH-FU CHANG, AJAY DIVAKARAN, ANTHONY VETRO, and HUIFANG SUN, "Algorithms and System for High-Level Structure Analysis and Event Detection in Soccer Video," Columbia University, ADVENT – Technical Report #111, June 2001.	
		HAO PAN, BAOXIN LI, and M. IBRAHIM SEZAN, "Automatic Detection of Replay Segments in Broadcast Sports Programs by Detection of Logos in Scene Transitions," IEEE ICASSP 2002, pp. 3385-3388.	
		LEXING XIE and SHIH-FU CHANG, "Structure Analysis of Soccer Video with Hidden Markov Models," ICASSP, 2002.	
		RICCARDO LEONARDI and PERANGELO MIGLIORATI, "Semantic Indexing of Multimedia Documents," IEEE 2002 (April – June 2002), pp. 44-51.	

Examiner Signature		Date Considered	
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